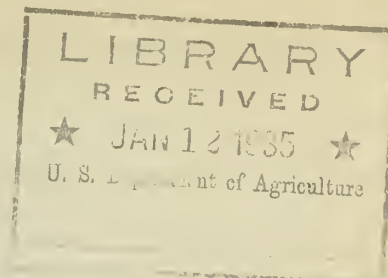


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## EQUIPMENT FOR LAUREL STARCH PLANT

## BOILER

W. M. Smith Company  
Birmingham, Alabama  
(Used Casey & Hedges)

- Item 1. Boiler furnished shall be of the return tubular marine type or internally fired type of a manufacturer's rated H.P. not less than 100, or having a total heating surface including tubes and fire box of not less than 1,100 sq. feet, designed for working pressure of not less than 100 pounds per sq. inch, and designed so as to meet fully all the requirements of the American Society of Mechanical Engineers for Steam Generating Boilers of 100 Boiler Horse Power at 100 lbs.
- Item 2. Alternate No. 1. One second-hand reconditioned steam generating boiler. Boiler and fittings furnished, installed, and connected as is required under item #1, except that in lieu of the boiler specified, a used reconditioned boiler, of not less than the rated H.P. specified, and covered by the same Warranty as is required for the new boiler, may be substituted, provided all of the specifications required for the new boiler are met.
- Item 3. Boiler shall be equipped with one duplex reciprocating feed water pump, one feed water injector, one safety valve, one fusible safety plug, one gas burner suitable for burning natural gas, necessary hand holes for cleaning, one mud valve for blowing sedimentary deposits, one water gauge complete with stop cocks and drain cock, three water gauge cocks, two of which are set at the maximum and minimum water level for safe operation, one 6" dial steam gauge - 0 to 200 pounds range.
- Item 44. The boiler shall be so designed that gas burning equipment may be removed and grates suitable for firing by coal may be installed without alteration to the boiler construction.
- Item 5. Concrete Base to receive said boiler, water supply, waste connection for blow-off and gauge cock waste will be brought to the site of the installation by others.
- Item 6. The boiler feed water pump above referred to shall be

of such size, design, and capacity that it will, when new, deliver 200% of the amount of water necessary to operate said boiler at its full rated load, and shall be steam driven by steam drawn from the boiler to which it is connected. It shall be equipped with a lubricating device to maintain proper lubrication in the steam end under pressure.

- Item 7. The injector furnished with this boiler installation, when new, shall be of such size and design that it will lift water at 80 degrees Fahrenheit, 5 feet, and will inject into the boiler to which it is connected, and from which it draws its power, the said feed water at a rate of 200% of the amount necessary to maintain the water level in the said boiler when steaming under its rated capacity.
- Item 8. The blow-off valve furnished shall be of a double wedge gate type with brass and/or bronze seats, and manually operated so that opening and closing may be executed by a single stroke of the operating lever.
- Item 9. The smoke stack and breeching furnished with this installation shall be not less than 70 feet in height above the boiler foundation level, not less than 30" in inside diameter, and shall be fabricated from black mild sheet steel of not less than 14 gauge, and shall be riveted or welded and restrained at not less than two levels by not less than three 1/4" guy cables at each level, properly anchored to dead men. Inspection and cleaning doors shall be of such size and so located in the hood and/or breeching so that soot, scale, and sediment can be removed without dismantling the installation. Damper shall be provided in the stack and operated by suitable lever and/or chain mechanism.
- Item 10. Insulating jacket furnished with this installation shall be composed of not less than 2" of 85% Magnesia Steam Boiler Insulation applied over wire mesh, which Magnesia Insulation shall be covered with a sheet steel jacket of not lighter than 24 gauge, which jacket shall be fitted in a workmanlike manner so as to protect the insulation from exposure at the boiler ends and/or fire box and/or all other openings.
- Item 11. The natural gas burner furnished with this installation shall be a burner capable of burning natural gas at such rate as may be necessary to maintain 100 H.P. steaming capacity under the boiler to which it is connected. The burner shall be of the multi-nozzle type and shall be provided with externally operated and ignited pilot light, individually and manually operated master control valve and pressure control fuel valve co-ordinated with the draft mechanism as set forth below, automatically operated

screen type adjustable draft door, operated by a steam pressure actuated mechanism so that if pressure in the boiler is reduced, draft and fuel supply will be properly actuated to increase heat and vice versa. Said automatic burner control shall be sensitive to the pressure change of five pounds boiler pressure or less.

Item 12. The following boiler accessories' spare parts shall be furnished: one steam gauge, complete; three gauge cocks, complete; three water gauge glasses, complete with gasket assembly; two complete sets of hand holes gaskets.

Item 13. The bidder herein will furnish properly executed written Warranty that the equipment furnished, installed, and connected ready to operate is free from defective material and workmanship, and shall further warrant that, exclusive of damage caused by over loading or low water level, this equipment will render the service for which it is designed for a period of one year. The bidder further warrants that he will replace such defective parts and workmanship completely installed within the one year period covered by the above Warranty without cost to the purchaser herein.

Contractor may, at his option, furnish in lieu of the Warranty under Item #1 and required under this Alternate, an Insurance Policy in the maximum principal amount of \$10,000 against all hazards originating in the said boiler, and/or its operation, and/or loss or damage incurred by breakdowns or the necessity for repairs, in some Accident and/or Casualty Company authorized to do business in the State of Mississippi and drawn in favor of the Emergency Relief Administration for Mississippi, George B. Power, Administrator and/or his successor, Vendees etc., covering a period of time from the date of installation to a like date in 1935. This policy shall also cover and protect and save harmless the Emergency Relief Administration for Mississippi from damage to persons or property by virtue of explosions and/or other boiler failures.

\$1985.00





EQUIPMENT FOR LAUREL STARCH PLANT

SULPHUR BURNER

Schutte-Koerting Co.  
Philadelphia, Pa.

- Item 1.            Sulphur Burner--to be made entirely of cast iron capable of burning a maximum of 12 lbs. of sulphur per hour when supplied with 30 cubic feet of free air per minute at 5 lbs. pressure. Price f. o. b. Laurel       \$294.00
- Item 2.            Sparger Pipe: This pipe shall consist of 1 2-1/2" vertical member made of 1/4" wall lead pipe 7' long, to which shall be attached 4 lateral branches each 2' long drilled with 1/8" holes to diffuse the gas in the proper manner. Price f. o. b. Laurel, Mississippi.   \$163.00
- Item 3.            The Hauser--Stander Tank Company, Cincinnati.  
Tidewater Red Cypress Tank, 7' Dia., 6' staves  
2" in Dia., equipped with 6-5/8" round iron  
hoops with necessary malleable lugs and hex nuts,  
with 2-1/2" brass outlet in staves near bottom of tank.  
Sparger pipe item 2 to be placed in this tank, cost  
f. o. b. Laurel, Mississippi.                               \$106.00
- Item 4.            Monarch rotary pressure blower, less motor size  
#4, capacity 44 cu. ft. of free air per minute, 5#  
pressure per sq. inch operating pressure equipped  
with the tight and loose pulley, 10 inches diam.,  
3 inches face. Price f. o. b. Laurel, Mississippi.       \$ 95.00
- Item 5.            Second hand induction motor, 2 HP capacity,  
220 volt, 3 phase, 60 cycle, 1800 RPM alternating  
current, Westinghouse, G.E. or equal. (This  
motor must be newly rewound and equipped with new  
bearings and carrying same warranty new motor would  
carry and be furnished complete with bolt down base  
and pulley to supply power to blower.) Price f. o. b.  
Laurel, Mississippi.                                       \$ 45.00

Total

\$703.00





## EQUIPMENT FOR LAUREL STARCH PLANT

### CENTRIFUGALS

Bird Machine Company  
South Walpole, Mass.

Item 1: 1-Solid Basket Centrifugal. Shall be 40" diameter, suspended, bottom-discharge type, and shall have a capacity for solids of approximately 9 cu. ft. It shall be constructed with cast steel top ring and bottom, imperforate 3/16" steel sheet bound with steel hoops, which shall be approximately 10 in number. It shall be fitted with 3 horizontal imperforate baffles properly constructed to prevent surging of the liquid outside. An excessive movement, or wobbling motion sufficient to cause undue vibration in the machine and/or damages to the bearings and collars will disqualify the machine, and shall be cause for replacement at the expense of the manufacturer. This unit must be guaranteed to handle at least (4000) four thousand gallons of liquid per hour without an excessive loss of speed and without being thrown out of balance during loading and unloading periods.

Spindle: Special solid alloy steel 4.3437" in diameter with tapered seats for basket and bearing.

Suspension Head: Bird, simplified design capable of carrying large out-of-balance loads without sway, full ball-bearing lubricated from a single source.

Frame: The machine will be mounted on a structural steel framing consisting of two A frames supporting channel cross members; A frames will be welded construction and of sufficient height to place the bottom of the basket 6'6" above the floor; this frame-work does not include operating platform or railings but does include supports for an operating platform in front of the machine.

Drive: Machine speed under operating conditions to be approximately 1150 RPM developing a centrifugal force of about 740 times gravity. Drive by a 25/5 HP, 1200/300 RPM (synchronous speed) 220 volt, 3 phase, 60 cycle, vertical, ball-bearing, direct-connected, two speed, centrifugal motor to be complete with enclosed magnetic push-button operated controller, 3 button control station marked "run", "unload" and "stop"; controller to be interlocked with the brake so that power is shut off when the brake is applied.

Brake: Self-locking band type 7" in width, asbestos lined, self-cooled and interlocked with motor control circuit.

Unloader: Manually operated, counter-balanced unloader with steel rack and serrated plow, arranged to unload each section of the basket without injury to the side of the basket or baffles.

Case: Side sheet and gutter bottom of 1/2" plate steel, gutter curb 1" plate steel, all joints welded and leak-proof; case ring cast steel attached with countersunk screws and having leakproof joints.

Feed Tube: Machine to be equipped with a 3" feed pipe threaded on the upper end and terminating in a special nozzle in the basket, mounted by means of a bracket attached to the case ring. Net weight above machine 10,180 lbs. Shipping weight 10,830 lbs. Dimensions in accordance print No. OF4S7-1 except for extra length framing.

The above unit is guaranteed to handle at least 4000 gallons of liquid per hour without being thrown out of balance during the loading and unloading periods.

Item 2: Perforated basket centrifugal: Drawing No. SSA3-4; capacity for solids 9.1 cubic feet; constructed with cast steel top ring and bottom, side sheet 3/16" steel plate perforated with 1/4" holes on 1-3/16" centers, bound with 10 steel hoops having the same dimensions as given on drawing No. SSA3-15; hoops accurately rolled to size, welded and shrunk in place.

Screens: Basket to be fitted with an 8 x 8 mesh steel drainage screen against the side sheet; inside of the drainage screen there will be supplied a split, lapped cotton filter bag made of Filter Media Corporation's material 150 TW-Cr; inside of the filter bag will be furnished a punched steel plate with 1/4" holes on 3/8" centers with lock lap joint for holding the filter bag in place, and whose function is to act as a protector for the filter cloth.

Drive: Machine speed under operating conditions to be approximately 1150 RPM, developing a centrifugal force of about 740 times gravity; drive a 20/3 HP, 1200/300 RPM (synchronous speed), 220 volt, 3 phase, 60 cycle, 2 speed, direct connected, vertical ball-bearing centrifugal motor, complete with fully magnetic push button operated controller with 3 button station marked "run", "unload" and "stop"; control tube interlocked with the brake, so arranged as to shut off the power when the brake is applied.

Spindle: Special solid alloy steel 4.3437" in diameter with tapered seats for basket and bearing.

Suspension Head: Bird, simplified design capable of carrying large out-of-balance loads without sway, full ball-bearing lubricated from a single source.

Frame: The machine will be mounted in a structural steel framing consisting of two A frames supporting channel cross members; A frames will be welded construction and of sufficient height to place the bottom of the basket 6'6" above the floor; this frame work does not include operating platform or railings but does include supports for an operating platform in front of the machine. A frames will be welded construction and of sufficient height to place the bottom of the basket on the level of the floor.

Brake: Self-locking band type 7" in width, asbestos lined, self-cooled and interlocked with motor control circuit.

Unloader: Machine to be equipped with a Bird hydraulic unloader so arranged that the plow will be lowered and raised by hydraulic power which will rapidly remove the solids from the basket without injury to the screen.

Case: Side sheet and gutter bottom of 1/2" plate steel, gutter curb 1" plate steel, all joints welded and leakproof; case ring cast steel attached with countersunk screws and having leak-proof joints.

Feed Tube: Machine to be equipped with a 3" feed pipe threaded on the upper end and terminating in a special nozzle in the basket, mounted by means of a bracket attached on the case ring.

Lump sum price for items No. 1 & 2 mounted in a battery  
f. o. b. Laurel, Mississippi

\$5,210.00



## EQUIPMENT FOR LAUREL STARCH PLANT

### CONVEYORS

Dodge Manufacturing Company  
Mishawaka, Indiana  
ordered through  
Woodward, Wight & Company  
New Orleans, Louisiana

- Item 1. 1-18" Inclined Slat Conveyor: 48'0" centers, operating at a speed of about 50 FPM consisting of 2 equally matched strands of roller chain right and left hand, 4" pitch with A-11 attachments every link. This conveyor to be furnished complete with 2-7/16" head shaft, bearings, collars and 10. T sprockets. This conveyor to be driven from belt conveyor by means of bevel gears and chain drive, which will be supplied \$320.00
- Item 2. 1-12" Flat belt conveyor: 66'0" centers, operating at a speed of 150 FPM consisting of 12"x4 ply rubber conveyor belt supported on ball bearing rolls spaced about 2'8" on carrying side and 8'0" on return side. Conveyor to operate in wood trough with hinged sweeps for discharging the potatoes as desired. Conveyor will be furnished complete with 1 15/16" drive shaft with collars, bearings and 16" x 12" C.I. pulley; 1 15/16" take-up shaft with collars, 9" take ups and 16" x 12" C.I. pulley. This conveyor to be driven by roller chain drive from 5 HP gear-motor, having low speed shaft operating at about 169 RPM \$324.00
- Item 3. 1-Vertical bucket elevator for washed sweet potatoes: 39'3" centers, operating at about 225 FPM. Elevator will consist of 10" x 8" galvanized perforated buckets mounted about 18" centers on 12" x 4 ply rubber elevator belt; 20" head pulley with shaft, collars and bearings; 20" boot pulley with shaft and take-ups. The casing will consist of 14 Ga. galvanized steel, 36" x 17" inside, with 2" x 2" corner angles. The casing complete with head and boot sections will be self supporting, but purchaser will supply connections to building for bracing same. Elevator will be driven by roller chain drive from a 2 HP totally enclosed gear-motor having low speed shaft operating at about 156 RPM and will be supported on motor bracket supplied with elevator. \$810.00
- Item 4. 1 Vertical bucket elevator for dried starch: 27'3" centers, operating at about 200 FPM. Elevator will consist of 7" x 4-1/4" salem steel elevator buckets spaced about 16" centers on 8" x 4 ply rubber elevator belt; 16" head pulley with shaft, collars and bearings; 16" boot pulley with shaft, collars and take-ups. The casing will consist of



14 Ga. steel, 30" x 12" inside, with 1-1/2" x 1-1/2" corner angles. The casing complete with head and boot sections, will be self supporting, but purchaser will supply connections to building for bracing same. Elevator will be driven by roller chain drive from 1-1/2 HP gear-motor having low speed shaft operating at about 156 RPM and will be supported on motor bracket supplied with elevator.

\$429.00

Item 5.     1-6" Inclined double flight screw conveyor: about 12'0" long, complete with steel box and cover, necessary fittings including discharge chute to elevator, countershaft box end and plain end with thrust bearing. This conveyor will be driven by chain drive from dryer conveyor, which chain drive is included with this equipment.

\$ 98.00

Item 6.     1-Horizontal 6" screw conveyor length 12'; emptying into hopper of vertical elevator which is set at right angle to screw conveyor, height of vertical elevator 26"; a second screw conveyor takes discharge from vertical elevator to center of hopper; end of this conveyor is 13'6" center to end of first screw conveyor; capacity of conveyor same as dry starch elevator in section #4.

\$677.00

Item 7.     1-6" Screw conveyor: approximately 3 feet long leading from starch dryer to vertical starch elevator

\$ 65.00

The specifications of elevator and screw conveyors to be the same as for section #4 except that screws will be single flight, all according to sketch designated Emergency Relief Administration for Mississippi, Laurel Starch Plant, drawing A, forwarded under separate cover.

All motors will be built for 220 volts, 60 cycles, 3 phase alternating current and will be supplied with push button automatic starters.

Contractor will furnish detailed construction drawings for the Emergency Relief Administration's approval one week after bid is accepted.

Total

\$2,723.00



EQUIPMENT FOR LAUREL STARCH PLANT

PULP DRYER

John B. Adt Company  
Baltimore, Maryland

Item 1. Pulp dryer: shall be of the rotary, steam heated, atmospheric tubular type, and shall be able to produce a minimum of 5 tons of pulp containing approximately 10% moisture per 24-hour day. It shall have an air pre-heater, and motor driven vapor exhaust fan and dust collector. It shall have approximately 120 steam heating tubes which may be arranged in rows or coils, and which are to be suitably placed in the shell of the dryer and tested for 30 lbs. steam pressure. The dimensions of this dryer shall be approximately 6' by 30'; and it shall be constructed out of 1/4" steel boiler plate, with all seams substantially welded. It shall be furnished with a one inch felt and canvas insulated cover to be applied to the cylinder after its installation. The dryer shall be provided with a suitable rotating mechanism and explosion proof motor of approximately 5 horse power.

Description and specification of the proposed "ADT" PULP DRYER. Model #6063, Cylinder Diameter 60", Cylinder length 30", cylinder contains 128 heating tubes, arranged in 18 coils, each coil containing 8 pipes. Thickness of cylinder shell 1/4" steel boiler plate. Cylinder insulated by a 1" hair felt and canvas cover to be applied after its installation.

This dryer is provided with an air preheater, motor driven exhaust fan and dust collector. The feeding chamber is furnished with a dust trap and a feed screw conveyor. The entire machine is supported on 12" extra heavy steel channels reinforced with steel I beams and requires no expensive foundations for its installation. The dryer cylinder together with the feed screw conveyor and the drag elevator are operated by a 5 HP 1200 RPM explosion proof motor mounted on a suitable base attached to the frame of the dryer and suitably geared to the drive shaft. The vapor exhaust fan will be direct connected to a 3 HP explosion proof motor 1200 RPM. Total shipping weight of this unit approximately 47000#. The dimensions of this dryer are shown on blue print No. DGD-2.

Screen for Dewatering Pulp: This screen shall be of a suitable traveling or rotary type, suitable to dewater pulp from starch screens, and shall be provided with an explosion proof motor.

Description and specification of the proposed Model No. 3715 "ADT" ROTARY STRAINER. The cylinder of this machine will be 37" in dia., approximately 15' long, and will be operated by a 2 HP. explosion proof motor mounted on a steel base attached to the frame of the machine, and suitably geared to the drive shaft. This strainer will be provided with suitable troughs for collecting the water discharge through the screen so that it can be piped to the sewer. Total shipping weight of this unit approximately 4300#. The overall dimensions are shown on blue print No. DGD-2.

Reserve hopper: It shall be of a type suitable of receiving the pulp before it is fed to the press. Description and specification of Reserve Hopper. This hopper will be approximately 5' square with hopped bottom and will have a capacity of approximately 1500# of screened pulp. Shipping weight approximately 600#.

Pulp or Dewatering Press: This machine is to be a roller type, continuous dewatering press, of filtering machine, and shall be provided with suitable driving mechanism and an explosion proof motor.

Description and specification of the Model No. 4824 "ADT" ROLLER TYPE CONTINUOUS DEWATERING PRESS. The filtering drum of this press is 48" in dia. x 24" wide, and is provided with 8 sections of filtering screen, which are easily removed and replaced when they become damaged. These plates are fastened directly to the filtering drum and all hinges and other movable parts are dispensed with. The pressure is applied to the material through a series of 5 rollers carried in an adjustable frame, which is adjusted manually to regulate the amount of material fed through the press and is adjusted automatically to compensate for any variation in the volume discharged. The pressure is applied to the roller frame by a hydraulic arrangement, which can be adjusted by varying the pressure in the hydraulic cylinder. A pressure of 4 tons can be applied to this frame with safety, and this is equivalent to a pressure of 65# per square inch in the water line supplying the hydraulic cylinders. This press is operated by a 3 HP 1200 RPM explosion proof motor mounted on a steel frame attached to the frame of the machine and suitably geared to the drive shaft.

Elevator: It shall be of a suitable drag type for conveying pulp to the dryer, and provided with an explosion proof motor. In making quotations on this machinery it will be necessary that a base price be quoted on a 17' center to center length between head shafts, and a per foot unit price for addition or deduction to this length. All general equipment quoted upon must be guaranteed to handle and process such material as may be necessary to produce 10 tons of sweetpotato starch per day under the general conditions listed above, and any

defects whether in workmanship or material, occurring within one year from date of delivery of the equipment must be replaced by, and at the expense of, the manufacturer.

Description and specification of the "ADT" DRAG TYPE ELEVATOR. This elevator will be 12" wide and provided with a double set of chains for the drag paddles.

The frame work of this elevator will be constructed of Georgia Pine and the casing of cypress. The elevator to be 17' c. to c. between head and tail shafts at the price quoted - for each additional length add \$2.00 per foot or for each reduction in length deduct \$2.00 per foot. There will be no motor furnished with this elevator as provisions will be made on the dryer for operating this unit.

\$11,143.00

Item 2. Dust Removing Apparatus: for use with pulp drying equipment. This apparatus shall consist of one 20" slow speed fan directly connected to one HP explosion proof motor complete with push button starter, dust collector, and 6 feet pipe, 3' x 6" in diameter, for use with fan

\$ 197.00

Total f.o.b. Laurel, Mississippi

\$11,340.00



## EQUIPMENT FOR LAUREL STARCH PLANT

### STARCH DRYER

F. J. Stokes Machine Company  
Philadelphia, Pennsylvania.

- Item 1. Shall be guaranteed to produce ten (10) tons of dry starch per 24 hour day, performing during this production a reduction from an initial 40% moisture content to a 12% final content. The size of this dryer shall be approximately 4' by 20' and its body shall be made of welded steel, jacketed for its full length, and with a steam space constructed for a working pressure of 30 lbs. per square inch, and fully tested for a hydrostatic pressure of 60 lbs. per square inch. This dryer shall be provided with a suitable rotary agitator which shall keep the starch in motion during the drying period, and which shall be driven by any necessary gears and pinions and directly connected to a suitable 15 horse power explosion proof motor. It shall be provided with a steam trap, a pressure reducing valve, a steam gauge, a vacuum gauge, and suitable lubricators. \$4868.00
- Item 2. Dust scrubber: shall be of a suitable cyclone type of dry dust collector, in combination with a wet dust collector, or a suitably constructed wet dust collector in which water is pumped over a sufficient area of surface to trap all starch dust coming over with the vapor. Either type furnished must be complete with observation glass, liquid level control, and clean out opening, and must be guaranteed to function satisfactorily. Reasonable evidence must be furnished that it has functioned satisfactorily for this purpose on a commercial scale. \$1191.00
- Item 3. Barometric condenser: shall be a counter current type, complete with baffles vapor inlet, vacuum connection and drain connection \$ 270.00
- Item 4. Vacuum pump: shall have a high efficiency, and a capacity approximately 100 cubic feet per minute, and be capable of producing and maintaining a vacuum in the dryer of 28 to 29 inches. Shall be complete with a suitable drive mechanism and 5 horse power explosion proof motor. \$1010.00
- Item 5. Discharge Hopper: shall be of a dust proof type with mechanically operated worm discharge hopper to be connected by means of suitable valves with a dust scrubber and vacuum pump. This discharge hopper shall be so arranged that



the discharge door on the dryer can be entirely enclosed to prevent dust and may be operated from the outside of the hopper. \$1405.00

Item 6. Hot Water Heater: This heater shall be a welded steel tank approximately 30" in diameter by 4' high, mounted on legs, and provided with steam spray inlet for heating the water. It shall be equipped with one thermostatic temperature control valve for controlling the steam inlet so that a constant temperature may be maintained by adjusting this valve, and shall have one bronze fitted 2" centrifugal pump direct driven explosion proof motor \$ 235.00

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Total \$8979.00



EQUIPMENT FOR LAUREL STARCH PLANT

HAMMER MILLS

Stover Manufacturing & Engine Co.  
Freeport, Illinois

- Item 1.      No. 92 Stover Hammer Mill: This unit has been re-designed for the purpose of grinding sweetpotatoes. It is fitted with a variable speed screw conveyor to regulate the flow of potatoes to the grinder; 1/8" stainless steel hammers are used in place of the regular type. The case has been designed to make it water tight and is fitted with water lines to supply alkaline sulphite solution to the grinder.
- Item 2.      No. 92 Stover Hammer Mill--construction as in item 1 but without screw conveyor.  
These units are manufactured on a time and materials basis, cost f. o. b. Freeport, Illinois \$1105.49
- Item 3.      Motors: 2-40 HP General Electric motors with starting boxes and V-belt drives to hammer mills, Price f. o. b. Freeport, Illinois \$ 872.96
- |       |           |
|-------|-----------|
| Total | \$1978.45 |
|-------|-----------|



10-23-34

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## EQUIPMENT FOR LAUREL STARCH PLANT

### STARCH PULVERIZER

Raymond Bros. Impact Pulverizer Co.  
Chicago, Illinois

<u>Item 1.</u>	<u>No. 00 Screen Pulverizer:</u> This unit is powered with a 7-1/2 HP direct connected, 3 phase, 60 cycle, 220 volt motor with starter. The unit is guaranteed to pulverize starch to a sufficient extent so that 90 to 95% will pass a 200 mesh screen. It shall be arranged to permit the attachment of tubular dust collector. Price f. o. b. Chicago	\$750.00
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<u>Item 2.</u>	<u>Fan, Motor and Tubular Dust Collector--</u> this unit arranged for attachment to the No. 00 Pulverizer. Price f. o. b. Chicago	\$190.00
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Attached drawings show the arrangement of this equipment.

Total	<u>\$940.00</u>
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EQUIPMENT FOR LAUREL STARCH PLANT

PUMPS

Worthington Pump and Machinery Corporation  
Harrison, New Jersey

- Item 1: 1-Centrifugal Pump, rated for 250 gallons per minute against a total head of 60' directly connected with electric motor of sufficient size (7-1/2 HP) to operate said pump under continuous maximum load, with not to exceed a 40° C. rise in temperature and for services on a 3 phase, 60 cycle, 220 volt alternating current (Worthington Monobloc 2-1/2 D-16 Pump)--freight allowed to Laurel. \$154.00
- Item 2: 1-Centrifugal Pump, rated for 600 gallons per minute against a 30' head, directly connected to an electric motor of suitable size (7-1/2 HP) to operate the pump under continuous maximum load, with not to exceed a 40° C. rise in temperature and for services on a 3 phase, 220 volt, 60 cycle alternating current (Worthington Type 4-L-1 Pump)--freight allowed to Laurel. \$288.00
- Item 3: 1-Centrifugal Pump, rated for 200 gallons per minute against a 20' head, directly connected with an electric motor of suitable size (3 HP) to operate the pump under continuous maximum load, with not to exceed a 40° C. rise in temperature and for services on a 3 phase, 220 volt, 60 cycle alternating current (Worthington Monobloc 2-1/2 D)--freight allowed to Laurel. \$124.50
- Item 4: 3-Centrifugal Pumps, rated for 50 gallons per minute against a 45' head, directly connected with an electric motor of suitable size (1 HP) to operate the pump under continuous maximum load, with not to exceed a 40° C. rise in temperature and for services on a 3 phase, 220 volt, 60 cycle alternating current (Worthington Monobloc 1 HP, 1-1/2 D Pump)--freight allowed to Laurel. \$281.70

Item 5: 4-Centrifugal Pumps, specifications similar to item 4. This pump is to be used to move finely ground sweetpotatoes; this material is somewhat like paper pulp stock and the impeller shall be suitably designed to move this type of material (Worthington Monobloc, 1 HP motor 1-1/2 D Pulp Stock Pump)--freight allowed to Laurel. \$436.80

Item 6: 6-Pumps similar to item 4 but with a capacity of 25 gallons per minute, against a 40' head (Worthington Monobloc, 1/2 HP motor 1-D Pump)--freight allowed to Laurel. \$336.00

Item 7: 1-Pump similar to item 4 but with a capacity of 100 gallons per minute against an 80' head (Worthington Monobloc, 5 HP motor 2-D pump)--freight allowed to Laurel. \$126.30

Item 8: 1-Pump similar to item 4 but with a capacity of 50 gallons per minute against a 45' head, pump bronze fitted (Worthington Monobloc, 1-1/2 HP motor 1-1/2 D Pump)--freight allowed to Laurel. \$116.40

Total - - - \$1863.70



10-23-34  
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## EQUIPMENT FOR LAUREL STARCH PLANT

### AUTO TRUCK SCALES

Fairbanks, Morse & Co.,  
New Orleans, La.

Item 1.      Scales: Suspended platform scales 9' x 18'. Capacity 15 tons, guaranteed to weigh accurately within 5 pounds at any weight between 0 and the capacity of the scale. The weighing beam is to be installed inside of the building and at a distance of not more than 5' from the inner edge of the weighing platform. All steel parts to be furnished by the manufacturer and the platform designed so that a reinforced concrete floor may be installed without alteration in the design. Cost f. o. b. Laurel \$766.65



EQUIPMENT FOR LAUREL STARCH PLANT

SCREENS FOR SEPARATING STARCH

FROM PULP

W. S. Tyler Company  
Cleveland, Ohio

Item 1. 2-Counter Flow Washing Screens: Composed of 4 screen sections separated by washing pockets. Overall dimensions width 4', length 13'. Standard 12" deep type 38 side rail construction as shown on the detail drawing. Vibrators V-23 Syntron type. Screen sections fitted with hoppers to collect discharge through screens. Power units for operation of the electric vibrators to be furnished with screens.

Description of Screen Sections; eight 20" x 48", wire cloth screen sections of 100 mesh stainless steel, inverted hooks punched for but without vibrating strips, equipped with patent reinforced edges, price f. o. b. Cleveland, Ohio \$26.00 each.

8-20" x 48" wire cloth screen sections of 4 mesh .054" monel metal, equipped with rubber cord punched for but without vibrating strips, equipped with patent reinforced edges, price F.O.B. Cleveland \$31.85 each.

Cost of unit

Washing screens \$1595.00 each	\$3190.00
100 mesh screen sections 8 at 26.00	208.00
4 mesh screen sections 8 at 31.85	254.80

Item 2. Tyler type 38 Hammer Electric Screen: Equipped wet feed distributor, independent stretch, fines hopper welded to the bottom of the body and V-16 electric vibrator, price complete f. o. b. Cleveland \$1020.00 1020.00

Screen sections: One 3' x 5' backing screen of 4 mesh .054" monel metal, standard reinforcing and patent hook strips, punched for but without vibrating strips and complete with rubber cord supports, price f. o. b. Cleveland 44.90

1-3' x 5' facing section; of 250 mesh chromium plated screen cloth, complete with reinforcing and patent inverted hook strips, reinforced down the center and punched for but without vibrating strips, 82.10

Price of items 1 & 2 complete	\$4799.80
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Stirring mechanism for the washing pockets is being designed and built into the screens at the Starch Plant, design not complete to date, approximate cost

	<u>500.00</u>
Total	\$5299.80

## EQUIPMENT FOR LAUREL STARCH PLANT

### TANKS

Laurel Machine & Foundry Company  
Laurel, Mississippi

These tanks are constructed of 1/4" standard steel plate, welded solid inside and tack welded on the outside. The bottoms of the tanks to be used for water, or for chemical reagents storage are flat. Those to be used for pulp and for starch milk storage have a slope of 1" per foot. Bronze nipples are set in the sides of the tanks; the bottom of the tank being flushed with the lowest point in the nipple. The tops of the tanks carry a welded stiffening angle bar 2-1/2" x 2-1/2" x 3/8".

<u>Item 1.</u>	4-10' diam. x 9', sloped bottom, for tables	at 194.50	\$788.00
2.	4-10' diam. x 9', flat bottom, for H <sub>2</sub> O and foot tables	at 189.50	758.00
3.	3-9' x 8'6", sloped bottom, for centrifugal	at 175.00	525.00
4.	2-7' x 7', 1 sloped and 1 flat bottom, for 3rd floor	at 104.50	209.00
5.	1-9' x 8' flat bottom, for chemical storage	at 175.00	<u>175.00</u>

Total - 14 tanks

\$2445.00

6.	2-Tanks 4'6" x 5', sloped bottom, for grinder		
7.	3-Oval tanks, 4'6" long, 2' wide, 2' high for pulp screens		
8.	1-Tank 4'6" in diameter, 5' high, for pulp reel		
9.	1-Tank 4'6" in diameter, 3'4-1/2" high, for S-basket centrifugal		
10.	1-Jacketed cone bottom Armco iron tank, 4'4" in diameter, 5' high, for sodium hydroxide storage		
11.	1-5' x 7' flat bottom tank		Lump sum bid
12.	1-flat bottom, 6'6" in diameter x 5' high, Armco iron walls, common steel bottom tank with cradle, for sodium hydroxide storage		on items 6 to 14

Total 10 tanks (10 on original order)

13.	12-Vertical geared, 3-1/2 HP stirring motors, with switches and couplings	\$3575.00
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contd.

Item 14. 16-15" bronze propellers; 12 1-15/16 bronze  
agitator shafts; 12-motor bearings  
and motor supports to set on top of tanks

Total

\$6020.00

Tanks to be set in place on foundations and  
motor supports to be set on tanks and drilled for  
attachment to top of tanks. Lower bearing supports  
for agitator shafts to be welded in place.



## EQUIPMENT FOR LAUREL STARCH PLANT

## POTATO WASHERS

Laurel Machine & Foundry Company  
Laurel, Mississippi

- Item 1.            A bucket type elevator to raise sweetpotatoes from a pit at the end of the flume to the first washer. The attached blue print gives the exact construction and dimensions of this unit. Price \$185.00
- Item 2.            Washer No. 1: This is in reality a soaking pit. It is 6' in diameter and approximately 20' long. To insure the passage of potatoes through this pit, a spiral has been placed in the pit revolving at such a rate that the potatoes require approximately 30 minutes to pass. The spiral will agitate the potatoes to some extent, thus a considerable amount of dirt will be removed in this washer. The attached blue print gives exact construction details.
- Item 3.            Washer No. 2: This is a drum washer, 4' in diameter and approximately 20' long, carrying a heavy water spray. The potatoes are carried through this unit by a spiral. The exact construction details are given on the attached blue print.
- Item 4.            Speed reducer and motor drive: to be furnished by the Laurel Machine & Foundry Company. This equipment is set on foundations furnished by the Laurel Starch Plant and is guaranteed to wash potatoes successfully. Changes found to be necessary in this equipment are to be made by the Laurel Machine & Foundry Co. Lump sum price on items 2, 3 and 4 \$1850.00
- Total \$2035.00

